REMARKS

Reconsideration and allowance are respectfully requested in light of the above amendments and the following remarks.

Claims 1-11 have been canceled in favor of new claims 12-17. Support for the subject matter of the new claims is provided in the original claims, Figs. 1 and 2, and the specification on page 6, line 4, through page 12, line 5.

Claims 1-11 were rejected, under 35 USC §102(e), as being anticipated by Ozukturk et al. (US 6,049,535). To the extent the rejections may be deemed applicable to new claims 12-17, Applicants respectfully traverse.

Ozukturk fails to disclose the features recited in claim 12 of: (1) an estimator that estimate the response of a channel using a data signal included in a received signal, (2) a calculator that calculates the reliability of a temporary decision value, which is based on the data signal and a channel response estimate of a pilot signal within the received signal, to produce a weighting coefficient, (3) a multiplier that multiplies the channel response estimate for the data signal by the weighting coefficient to produce a weighted channel response estimate for the data signal, and (4) a combiner that combines the weighted channel response estimate for the data signal with

the channel response estimate for the pilot signal to obtain a combined channel response estimate.

By contrast to the above-noted claimed features, Ozukturk discloses in Figs. 6 and 7 an apparatus for estimating the channel response of a received pilot signal and correcting the phase of the received pilot signal based on the estimated channel response. Ozukturk does not disclose estimating the channel responses of <u>both</u> the received pilot signal and a received data signal, as recited in claim 17. Since Ozukturk does not disclose estimating the channel response of a received data signal, it necessarily follows that Ozukturk cannot disclose the claimed features of: (1) a multiplier that multiplies an estimate of the data signal's channel response by a weighting coefficient, derived from a channel estimate of a received pilot signal, and (2) a combiner that combines the weighted estimate of the data signal's channel response with the estimated channel response of the received pilot signal to produce a combined channel estimation value. The following discussion culled from Ozukturk's specification evidences that Ozukturk's apparatus does not estimate the channel responses of <u>both</u> the received pilot signal and a received data signal, as recited in claim 12.

Ozukturk discloses in Fig. 6 that an input signal x(t) includes interference noise of message channels, multipath

signals of the message channels, thermal noise, and multipath signals of a pilot signal (Ozukturk col. 33, lines 16-19). The signal is provided to an AVC 601, which includes a despreading means 602, a channel estimation means for estimating the channel response 604, a correction means for correcting a signal for effects of the channel response 603, and an adder 605 (col. 33, lines 19-24).

AVC despreading means 602 is composed of multiple code correlators (see Fig. 7) that each use a different phase of the pilot code c(t) provided by the pilot code generator 608 (col. 33, lines 24-27). The output signal of this despreading means corresponds to a noise power level if the local pilot code provided to the despreading means is not in phase with the code signal of the received pilot signal (col. 33, lines 27-30). Alternatively, it corresponds to the received pilot signal power level plus noise power level if the phases of the pilot code within the received pilot signal and the locally generated pilot code are the same (col. 33, lines 30-33).

The output signals of the correlators of the despreading means are corrected for the channel response by the correction means 603 and are applied to the adder 605, which collects all multipath pilot signal power (col. 33, lines 33-37). Channel response estimation means 604 uses the combined pilot signal and

the output signals of the despreading means 602 to provide a channel response estimate signal, w(t), to correction means 603 (col. 33, lines 42-47). The output signal of the despreading means 602 is also provided to the acquisition decision means 606, which decides, based on a particular algorithm such as a sequential probability ratio test (SPRT), if the present output levels of the despreading circuits correspond to synchronization between the locally generated code and the desired input code phase of the received pilot signal (col. 33, lines 47-53). If the detector finds no synchronization, then the acquisition decision means sends a control signal a(t) to local pilot code generator 608 to offset its phase by one or more chip periods (col. 33, lines 53-56). When synchronization is found, the acquisition decision means informs tracking circuit 607, which achieves and maintains a close synchronization between the received and locally generated code sequences (col. 33, lines 56-60). An exemplary implementation of the <u>Pilot</u> AVC used to despread the pilot spreading code is shown in FIG. 7 (emphasis added) (col. 33, lines 61-62).

As may be determined by examination of Ozukturk's disclosure provided above, Ozukturk does not disclose estimating the channel response of a data signal, as proposed in the Office Action (see Office Action section 3, lines 5-6), and does not disclose a

tracking means 607 that tracks both data and pilot signals within a received signal, as proposed in the Office Action (see page 3, lines 4-5). Instead, Ozukturk discloses estimating the channel response of only a pilot channel and tracking only the synchronization between the code sequence of the received pilot signal and that generated locally in generator 608.

Accordingly, the Applicants submit that Ozukturk does not anticipate the subject matter defined by claim 12 of: (1) an estimator that estimate the response of a channel using a data signal included in a received signal, (2) a calculator that calculates the reliability of a temporary decision value, which is based on the data signal and a channel response estimate of a pilot signal within the received signal, to produce a weighting coefficient, (3) a multiplier that multiplies the channel response estimate for the data signal by the weighting coefficient to produce a weighted channel response estimate for the data signal, and (4) a combiner that combines the weighted channel response estimate for the data signal with the channel response estimate for the pilot signal to obtain a combined channel response estimate. Independent claim 17 similarly recites the above-described features distinguishing apparatus claim 12 from Ozukturk, though with respect to a method. For similar reasons that these features distinguish claim 12 from

Ozukturk, so too do they distinguish claim 17. Therefore, allowance of claims 12 and 17 and all claims dependent therefrom is warranted.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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Date: July 7, 2005
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